CONTEXT
LANDSCAPE ARCHITECTURE

NEW HIGH SCHOOL IN JERRABOMBERRA

NSW GOVERNMENT & SCHOOLS
INFRASTRUCTURE NSW

NSW GOVERNMENT Education
School Infrastructure

New High in Jerrabomberra

State Significant Application (SSD-14394209)

Landscape Design Report

by

CONTEXT Landscape Architecture

in collaboration with TKD Architects

for

NSW Government &
Schools Infrastructure NSW

Context and our design team collaborators acknowledge the Traditional Custodians of the land, and recognise Elders past and present.

Through authentic engagement with Aboriginal people and the landscapes within which we work, we strive to deepen our understanding of Country and our relationship with its People.

Document Control

Rev	Date	Description	By	Approved
A	02.09.21	SSDA Issue	CK	HD
B	08.09.21	SSDA Issue	CK	HD
C	09.09.21	SSDA Issue	CK	HD
D	13.09.21	SSDA Issue	CK	HD

Contents

A Introduction

1. Introduction

This Landscape Design Report accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 14394209). The SSDA is for a new high school located at Jerrabomberra.

This report addresses the Secretary's Environmental Assessment Requirements (SEARs), notably:

Item	Report Section
GENERAL REQUIREMENTS	
– likely interactions between the development and existing, approved and proposed operations in the vicinity of the site	A, D also refer to Architectural Design Report
– a description of any proposed building work	A
– a description of existing and proposed operations, including staff and student numbers, hours of operation, and details of any proposed before/after school care services and/or community use of school facilities.	A, B
– a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development.	Architectural Design Report
– plans, elevations and sections of the proposed development	D also refer to Architectural Design Report
– a site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process).	
– cladding, window and floor details, including external materials.	Architectural Design Report
– plans and details of any advertising/business identification signs to be installed, including size, location and finishes.	Architectural Design Report
KEY ISSUES	
The EIS must address the following specific matters:	
1. Statutory Context, Strategic Context and Policies Address the statutory provisions contained in all relevant legislated and draft environmental planning instruments, including but not limited to: - State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017, Schedule 4 - Schools - Design Quality Principles	C, D also refer to Architectural Design Report
Address the relevant planning provisions, goals and strategic planning objectives in all relevant planning policies including but not limited to the following: - Crime Prevention through Environmental Design (CPTED) Principles. - Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017). - Draft Greener Places Design Guide (GANSW).	C, D also refer to Architectural Design Report
2. Built Form and Urban Design	Architectural Design Report
3. Trees and Landscaping Provide: – where relevant, an arboricultural impact assessment prepared by a Level 5 (Australian Qualifications Framework) Arborist, which details the number, location and condition of trees to be removed and retained, includes detailed justification for each tree to be removed and details the existing canopy coverage on-site. – a detailed site-wide landscape strategy, that: – details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage. – provides evidence that opportunities to retain significant trees have been explored and/or informs the plan. – considers equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation. – demonstrates how the proposed development would: – contribute to long term landscape setting in respect of the site and the streetscape. – mitigate the urban heat island effect and ensure appropriate comfort levels on-site. – contribute to objectives to increase urban tree canopy cover. – a detailed landscape plan, including a schedule of materials and finishes prepared by a suitably qualified person. Relevant Policies and Guidelines: – Australian Standard 4970 Protection of trees on development sites. – Draft Greener Places Design Guide (GANSW). – Technical Guidelines for Urban Green Cover in NSW (Office of Environment and Heritage (OEH), 2015).	C, D

A Introduction

Item	Report Section
4. Environmental Amenity	Architecture Design Report
5. Transport and Accessibility – details of the proposed development, including: – a map of the proposed access which identifies public roads, bus routes, footpaths and cycleways. – pedestrian site access and vehicular access arrangements, including for service and emergency vehicles and loading/unloading, including swept path analysis demonstrating the largest design vehicle entering and leaving the site and moving in each direction through intersections along the proposed transport routes. – car and motorcycle parking, bicycle parking and end-of-trip facilities. – drop-off / pick-zone(s) and arrival/departure bus bay(s). – pedestrian, public transport or road infrastructure improvements or safety measures.	D also refer to Architecture Design Report
6. Ecologically Sustainable Development (ESD)	Architecture Design Report
18. Waste	Architecture Design Report
PLANS AND DOCUMENTS	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. Any plans and diagrams included in the EIS must include key dimensions, RLs, scale bar and north point.	

Item	Report Section
In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following: - Design report to demonstrate how design quality would be achieved in accordance with the above	ALL
Key Issues including: – architectural design statement – diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal. – detailed site and context analysis – analysis of options considered to justify the proposed site planning and design approach – summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice. – summary report of consultation with the community and response to any feedback provided.	Architecture Design Report D Architecture Design Report Architecture Design Report Architecture Design Report Architecture Design Report
CONSULTATION	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with: – the relevant Council. – Government Architect NSW (through the NSW SDRP process) – Transport for NSW.	Architecture Design Report

A Introduction

2. Proposal

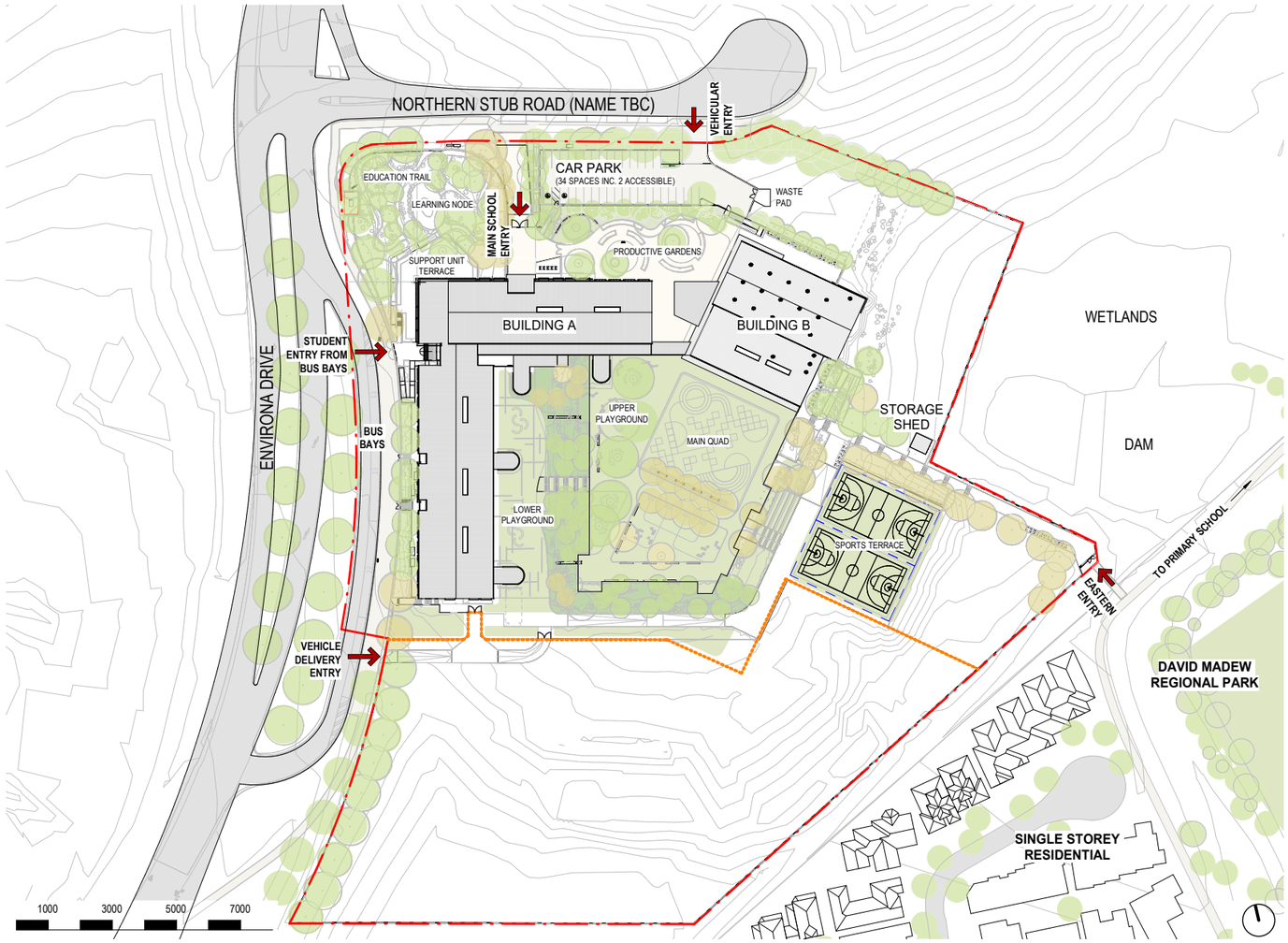
The proposed development is for the construction of a new high school in Jerrabomberra. The proposal will meet community demand and to ensure new learning facilities are co-located near existing open space infrastructure. The proposal generally includes the following works:

- Site preparation;
- Construction of a series of buildings up to three storeys including administration/staff areas, library, hall and general learning spaces;
- Construction of new walkways, central plaza and outdoor games courts;
- Construction of a new at-grade car park;
- Associated site landscaping and open space.

The proposal has been designed to accommodate approximately 500 students with Stream 3 teaching spaces, however the core facilities will be future proofed to a Stream 5 to enable possible future expansion to meet projected demand.

The proposal will include site preparation works, such as clearing and levelling to accommodate the proposed buildings and play areas. The proposal will involve the construction of a series of buildings housing general learning spaces, administration and staff wings, outdoor learning areas, a library and assembly hall.

The proposal will include construction of a new driveway and hardstand with access proposed off the northern stub road east of Environa Drive. Pedestrian access is proposed off Environa Drive and the northern stub road.



Proposed Landscape Site Plan

Source: TKD Architects

A Introduction

3. Site Description

The proposed development is located within the South Jerrabomberra Innovation Precinct, also referred as the Poplars Innovation Hub, in the local government area of Queanbeyan-Palerang Regional Council.

The school site is part of an existing lot (Lot 1 in DP 1263364), which is approximately 65.49ha in area and will be characterised by a mix of business park and open space uses and a new north-south connector road named Environa Drive.

Delivery of the Precinct is underway with Environa Drive currently under construction. Most of the lot, however, remains undeveloped.

The school site is subject to a proposed lot (Lot 2 in DP 1263364), which was approved by Council under DA332-2015 on 10 March 2021 but is not yet registered. The approved lot is irregular in shape, is largely cleared and is approximately 4.5ha in area. A small dam is located adjacent to the south eastern boundary of the site, which forms part of a broader wetland.

The site is located in excellent proximity to existing open space facilities. It adjoins David Madew Regional Park to the south east and is located 100m east of an existing recreational field associated with Jerrabomberra Public School.

A description of the site is provided in the table below.

Site aerial depicting the land subject to the proposed High School.
Source: TKD Architects

Table 1 – New High School in Jerrabomberra Site Description	
Item	Description
Site address	School address yet to be determined however, it is located within the Jerrabomberra Innovation Precinct at 300 Lanyon Drive, Jerrabomberra.
Legal description	Lot 1 in DP 1263364 (existing) Lot 2 in DP 1263364 (proposed, but not registered)
Total area	Lot 1 – 65.49ha Lot 2 – 4.5ha
Frontages	The site provides frontage to Environa Drive and the northern stub road, both currently under construction.
Existing use	The site is undeveloped and contains a series of small vegetation clusters scattered across the site.
Existing access	Existing access is via an informal unsealed driveway off Tompsitt Drive along the northern boundary of the existing lot. The site will be accessed via Environa Drive and a secondary access road (North Road), which is currently under construction.
Context	Land to the south is primarily residential in nature. Jerrabomberra Public School and David Madew Regional Park are located to the east/south-east, while land to the west is undeveloped and features Jerrabomberra Creek. The site is located within the South Jerrabomberra Innovation Precinct, which is currently under construction. The areas north and west of the site are currently undeveloped but the site is currently undergoing a transition from rural to business park uses. Development further north on the opposite side of Tompsitt Drive and along Edwin Land Parkway includes retail and commercial uses. Development immediately to the south includes existing low density residential development. Land in the south west has been identified for future low density residential, light industrial and business park uses.

A Introduction

4. Design Report

This Design Report provides an analysis of the site's current constraints and opportunities for the school's development. The report has also been developed to establish design guidelines and development parameters to clarify the design intent of the proposal and demonstrate how design quality will be achieved in accordance with the Design Guide for Schools and the Design Quality Principles outlined in Schedule 4 of the Education SEPP 2017:

Principle 1 Context, Built Form and Landscape

Principle 2 Sustainable, Efficient and Durable

Principle 3 Accessible and Inclusive

Principle 4 Health and Safety

Principle 5 Amenity

Principle 6 Whole of Life, Flexible and Adaptive

Principle 7 Aesthetics

Each of the Design Quality Principles relevant to the Landscape Design are discussed in detail in the following sectiomns of this report.

1 Context, built form and landscape

New school development should:

- Respect and respond to its physical context, neighbourhood character, streetscape quality and heritage
- Consider interpretation of Aboriginal cultural heritage within the design of buildings and open spaces in consultation with local Aboriginal community
- Respond to its natural environment including scenic value, local landscape setting and orientation
- Retain existing built form and vegetation where significant
- Include tree planting and other planting that enhances opportunities for play and learning
- Ensure landscaping improves the amenity within school grounds and for uses adjacent to the school
- Be informed by a current Conservation Management Plan (CMP) and consider local heritage items both on the school site and in the local neighbourhood
- Take advantage of its context by optimising access to nearby transport, public facilities and local centres
- Consider height and scale of school development in relationship to neighbouring properties.

2 Sustainable, efficient and durable

New school development should:

- Be responsive to local climate including sun, wind and aspect
- Select materials and approaches to detailing that are robust and durable
- Integrate landscape, planting and Water Sensitive Urban Design (WSUD) principles to enhance amenity and building performance
- Include deep soil zones for ground water recharge and planting
- Minimise reliance on mechanical systems
- Include initiatives to reduce waste, embodied energy and emissions, through passive design principles and the use of advanced energy production systems where possible
- Maximise opportunities for safe walking, cycling and public transport access to and from the school.

3 Accessible and inclusive

New school development should:

- Establish security requirements early to ensure any required secure lines can be designed and integrated with built form
- Balance security with accessibility and inclusiveness by minimising the use of fencing particularly along street frontages
- Engage students, educators and the community in development of the vision and design brief for the school
- Allow for passive and dynamic play of different age groups
- Provide school frontages and entrances that are visible, engaging and welcoming
- Encourage access for members of the community to shared facilities after hours
- Ensure clear and logical wayfinding across the school site and between buildings for all users including after hours community users
- Ensure accessibility for all users of the site
- High rise schools should consider the impact of circulation times on timetables and pedagogical models, particularly when accessing core learning spaces. This may have design implications for spatial planning, lift and circulation requirements.

4 Health and safety

New school development should:

- Locate buildings and design facades that optimise fresh air intake and access to daylight
- Prioritise pedestrians and avoid conflicts between vehicles and people
- Provide covered areas for protection from sun and rain
- Support safe walking and cycling to and from school through connections to local bike and foot paths and the provision of bike parking and end of journey facilities
- Support passive surveillance, including through the location of toilets and areas for communal use outside of school hours
- Incorporate Crime Prevention Through Environmental Design (CPTED) principles
- Clearly define access arrangements for after school hours
- Consider location and number of toilet facilities to allow safe use by different age groups and genders.

5 Amenity

New school development should:

- Be integrated into, and maximise the use of the natural environment for learning and play
- Ensure access to sunlight, natural ventilation and visual outlook wherever possible
- Facilitate flexible learning by providing access to technology
- Seek opportunities for buildings and outdoor spaces to be learning tools in themselves
- Provide a diversity of indoor and outdoor spaces to facilitate informal and formal uses
- Provide buffer planting in setbacks where appropriate to reduce the impact of new development
- High rise schools should consider and seek to minimise the negative impacts of overshadowing and wind on surrounding built form and open space, and on school grounds.
- Ensure outdoor play ground space is sufficient to accommodate the student population including future growth.

- Locate buildings away from noisy roads and other noise sources to ensure acoustic levels within teaching and learning spaces are acceptable
- Where teaching and learning spaces must be located alongside noise sources, arrange built form to ensure dual aspect that will allow for natural ventilation away from the noise source. In extreme cases, mechanical systems and other technologies may be necessary to ensure acoustic levels can be maintained along with cross flow ventilation and natural light.

6 Whole of life, flexible and adaptive

New school development should:

- Allow for future adaptation to accommodate demographic changes, new teaching and learning approaches and the integration of new technologies
- Be based on a masterplan of the school site that includes the testing of options for future potential growth
- Take a whole-of-lifecycle approach when considering cost and consider wider public benefits over time
- Provide capacity for multiple uses, flexibility and change of use over time
- Respond to the findings of a site appraisal including in-ground conditions, contamination, flora and fauna, flooding, drainage and erosion, noise and traffic generation
- Understand the potential impacts of future local projected growth
- Design learning spaces to cater for a range of learning styles and group sizes
- Consider providing areas for collaboration, group learning, presentations, specialised focus labs, project space and wet areas, display areas, student breakout, teacher meetings, and reflective / quiet spaces.

7 Aesthetics

New school development should:

- Reflect a commitment to and investment in design excellence
- Create engaging and attractive environments
- Achieve a purposeful composition of materials and elements through a rigorous design process
- Provide an engaging environment for pedestrians visually and materially along public street frontages
- Seek opportunities to enhance public facing areas with landscaping and ensure landscape and building design are integrated
- Integrate service elements with the building design
- Balance internal spatial requirements with an external mass and scale that responds to its environment
- Avoid long stretches of security fencing to public facing areas through arrangement of building edges, landscaping, gates and other openings
- Look for opportunities to include public art.

B Project Background

1. Project Background

The new high school in Jerrabomberra is a public secondary school, developed by Schools Infrastructure NSW. It falls within the Monaro Cluster of schools, comprising projects in Jerrabomberra, Bungendore and Googong. The purpose of the Monaro Cluster is to address the increased learning demand created by the rapid growth in the new residential development areas in each of these existing towns/ neighbourhoods.

The increase in demand for schools also stems from the newly introduced 'NSW Pathway Zones' seven-year phasing plan which seeks to reallocate NSW-residing student enrolments back to the NSW live-in catchments from the ACT.

The new schools within the Monaro Cluster of Schools program will address this increased need whilst also ensuring equitable access to contemporary learning spaces for students of NSW.

2. Project Brief

The key requirements of the brief are based on the Department of Education's Educational Facilities Standards and Guidelines (EFSG). Under the EFSG, the school is referred to as a Stream 3 school, which would allow up to 500 students. However, selected facilities of the school are proposed to be Stream 5, which would futureproof the school for up to 1000 students, should the learning spaces be expanded in future.

2.1 Required School Facilities:

The facilities that are designed to meet Stream 5 requirements are as follows:

- Staff Areas
- Administration Areas
- Hall
- Canteen

Other elements specifically required in the project brief are:

- The Food Technology area is designed with asemi-commercial kitchen
- The Hall is provided with a stage area

The EFSG also sets out requirements for particular spatial adjacencies, environmental performance, durability, safety and security. All these requirement form part of the project brief, and apply to architecture, interiors, landscape and engineering aspects of the design.

2.2 Hours of Usage

Refer to the Architectural Design Report

2.3 Ecologically Sustainable Development (ESD)

The project has been developed using the principles of ESD to create a site wide strategy, and has been assessed against a suitable accredited rating framework - Greenstar. The project is expected to achieve a high level of environmental sustainability and is targeting a 4 Star rating, which is deemed to represent an Australian Best Practice development.

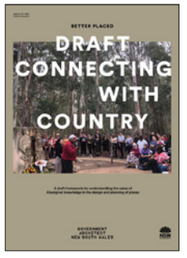
These ESD principles adopted for the project will contribute to the conservation of resources and future resilience across the whole life cycle of the project; from construction, through to the operational phase and provide opportunities for inherent pedagogy.

An ESD Report has been prepared as part of the EIS submission. Refer to the ESD Report for further information. relevant to the landscape design such as effective water management, rainwater harvesting and plant selection. It should be noted that the majority of the selected plants are drought-tolerant endemic or native species with low water requirements.

C Design Guidelines and Principles

1. Design Standards and Guidelines

The design standards and Guidelines presented herein outline the relevant standards shaping our design approach the school.



EFSG Design Guidelines

Department of Education & Communities

The EFSG provides information to assist those responsible for or with an interest in, the management, planning, design, construction and maintenance of school facilities

Better Placed

Design Guide For Schools

Government Architect NSW, 2018

Is an integrated design policy for the built environment of NSW, developed by the Government Architect. It establishes the value of good design and identifies key concepts, good process, and objectives for good design outcomes.

Better Placed

Environmental Design In Schools

Government Architect NSW, 2018

The document explains how reducing

environmental impact can help schools to optimise their value as social, environmental, and economic assets for new or established communities

Everyone Can Play

A Guideline To Create Inclusive Playspaces

Department of Planning and Environment, 2019

Everyone Can Play is best practise guideline for local councils and community groups to make playspaces across NSW more inclusive

Connecting with Country

A Framework to understand the importance of Aboriginal knowledge in designing

Government Architects, 2020

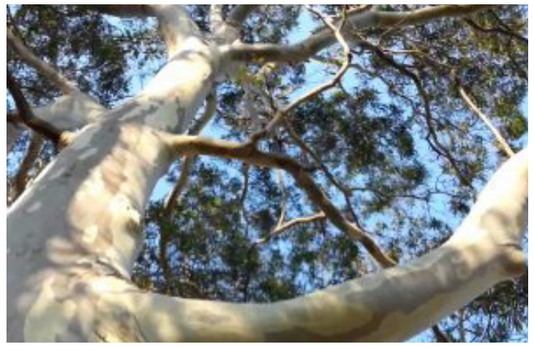
A draft framework for understanding the value of Aboriginal knowledge in the design and planning of places.

C Design Guidelines and Principles

2. Landscape Design Principles

Through the detailed site analysis and masterplan development, the following Landcape Design Principles have been developed for the project and have informed the landscape design of this project.

1



Identity

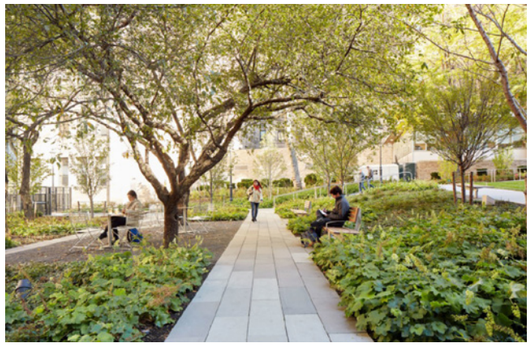
Establish a strong sense of identity for the new campus by providing strong connections to the landscape character of the site. The landscape design incorporates Connection with Country design opportunities, this strong identity will help to instill pride in the school, its grounds and in the community.

2

Access

Provide spaces that are inclusive, accessible and well defined through the use of sight-lines, materiality and the establishment of strong visual axes. Include a range of level change transitions, from the direct to the meandering links. All places will be well connected and encourage both recreation and rest, to foster exploration and curiosity through using biophilic design principles.

3



Green Amenity

Create spaces that are soft, greener and have a strong connection to nature. Outdoor learning spaces will incorporate technology, water sensitive urban design and flexible furniture to provide an innovative and progressive campus environment.

4

Diverse Spaces

Provide diverse spaces on the campus to encourage a range of activities for the students. Including areas of respite and foster moments of curiosity. This is executed through a variety of spaces designated for individual study, small groups and large classes as well as passive and active recreation.

D Landscape Design

1. Landscape Structure Plan

UPPER CAMPUS

- Main Entrance
- Productive gardens
- Edùcational walk
- Gathering/Yarning Circle
- Car Park

MAIN QUADRANGLE

- Lower terrace
- Dynamic gathering & play area
- Social gathering spaces
- Terraced landscaping

SPORTS TERRACE

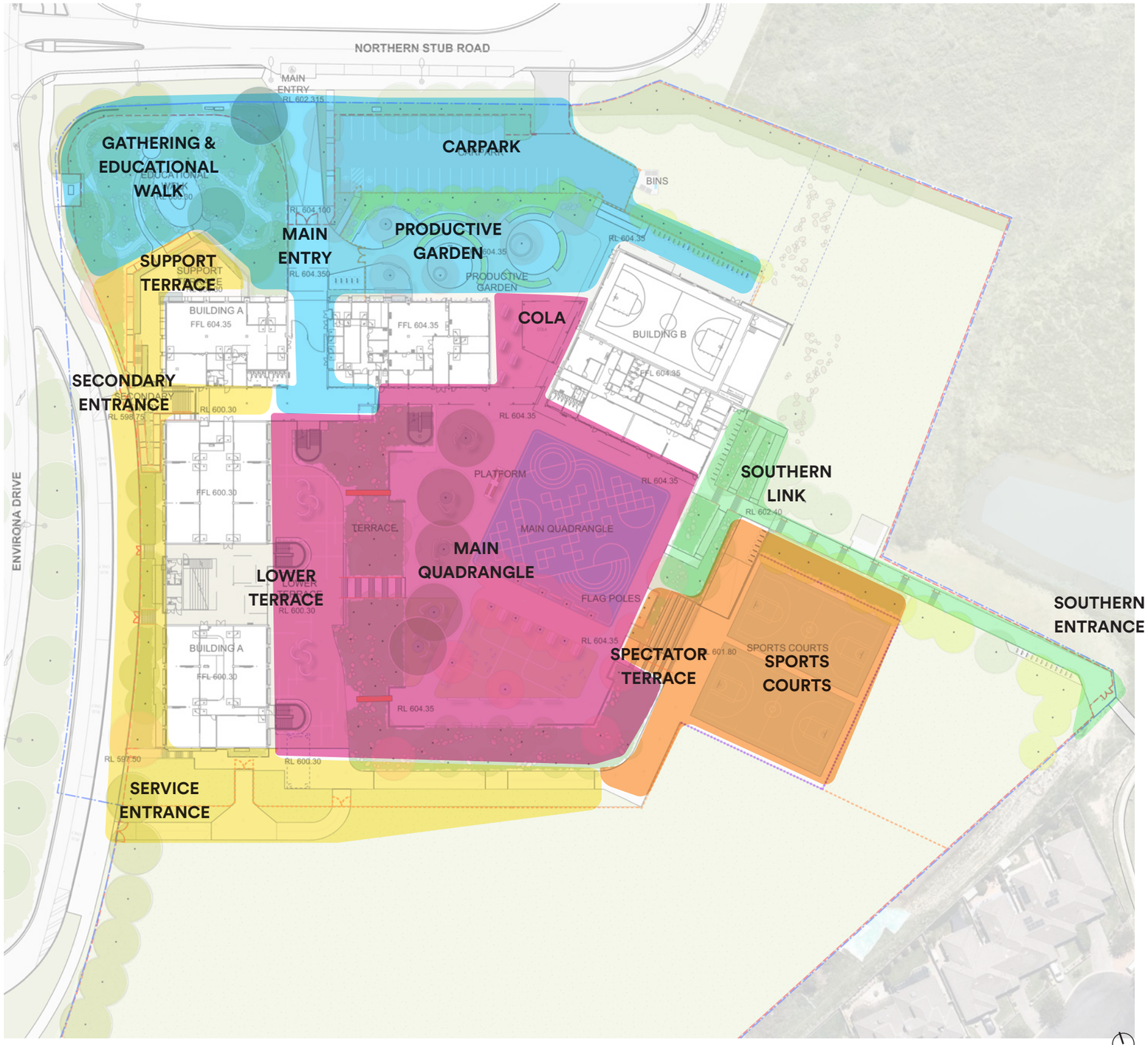
- Spectator seating
- Sports courts

WESTERN CAMPUS

- Support terrace
- Secondary entrance
- Service & emergency access

SOUTHERN CAMPUS

- Accesabile connections
- Southern entrance forecourt



D Landscape Design

2. Connection with Country

1.1 Overview

The new High School in Jerrabomberra has been developed to respond to the Draft Connecting to Country Framework and through consultation with Aboriginal Educational Consultative Group (AECG) and Ngambri Elder Woman, Dr Matilda House, to create a strong, place driven identity that will help instill pride in the school and community.

A Connection with Country has further been developed through the the architectural principles of Purpose, Place and People and the landscape principles of Identity, Access, Green Amenity and Diversity. Refer to Part N of the Architectural Design Report which discusses the implementation of Connection with Country into the architectural principles and the architecural design.

The siting of the school in the midst of an open space provides an inherent connection with the exterior expanse, sky, creek, landscape, which would not otherwise be easily achieved from a more urban site.

Country has been embedded within the campus design and explored within the landscape. Spatially, this concept has been developed through providing welcoming, inclusive entry spaces and gathering spaces throughout the campus which lend the opportunity for indigenous learning, the ability to gain nourishment from the land and to learn to manage the land. Endemic planting, indigenous foods and medicinal plants further strengthen these opportunities.

The project seeks to further consider Connection with Country through a number of opportunities which include collaboration with traditional custodians and indigenous artists to develop integration of interpretive signage, artwork and place names; consider opportunities for shared use agreements of school facilities; the holding of a smoking ceremonies; and possibilities to learn from cultural practices and cultural land management.

So far, the design team has met with local Indigenous representatives on site twice, to walk on Country and also to discuss design progress.

1.2 Walk on Country - Recommendations and Implementations

The key landscape outcomes from the initial Walk on Country are summarised below:

Recommendation: *Ridgelines in the distance are important have been considered in the design.*
Design Response: The buildings step down the site, following the natural topography. This also allows views out from the buildings to the south, where the ridge lines can be seen.

Recommendation: *Abundance of stone on site. The rocks are important and should be celebrated.*
Design Response: The rocks will be incorporated and celebrated throughout the landscape design, specifically in the educational walk and to navigate level difference in lieu of retaining walls.

Recommendation: *Use of natural materials in the pavements and design critical to establish link to the country/site & community.*
Design Response: Natural materials for pavements are used where possible, however the scope is somewhat limited to accessibility requirements for schools. The incorporation of patterns by local artists will be investigated during the future design stages. Concrete pavements can include exposed aggregate that is in keeping with local stone colours.

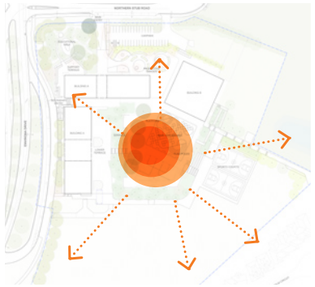
Recommendation: *Creation of a 'yarning circle' in the landscape shown on the north-west corner site corner was suggested. Could use rocks excavated from the site.*
Design Response: A yarning circle has been added into the design in the location suggested during the Walk on Country within the educational walk precinct It includes rocks from the site.

Recommendation: *The Golden Sun Moth is significant to the site and should be referenced, habitat provided and opportunity for interpretation. In January and February, Bogong moths come out of the rocky outcrops visible in the distance from the site.*
Design Response: The Bogong moth has been used as the departure point for the design of the folding metal screens. Future interpretation opportunities will be investigfated during the next design stages.

Recommendation: *The site was unlikely to have been heavily treed in the past – more alpine type plants. Trees would have been Yellowbox and Stringybark. Trees proposed beside the quadrangle: need to have places to sit under them.*
Design Response: Seating opportunities under trees has been included in the landscape plan in a variety of locations, including beside the main quadrangle. The inclusion of Yellowbox and Stringybark will be considered in the final planting design.

Recommendation: *References to Country need to be integrated throughout the whole site.*
Design Response: References to Country has been fully integrated throughout the scheme, with the high point of the site being the key strategic driver to how the buildings have been located on site. This is supplemented by materials choices, colour pallettes, and will be further expanded via graphic design overlay and naming of buildings, once these aspects are developed.

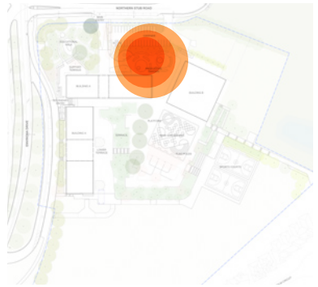
Visual Connections



Opportunities

1. The central Quadrangle is the highpoint of the site, providing a strong visual connection to surrounding ridge lines and landscape features.
2. Viewing platforms will allow for the connection with these elements

Nourishment from Country



Opportunities

1. Productive gardens provide an opportunity to include local indigenous foods and medicinal plants alongside the more common food crops to encourage educational opportunities.
2. Outdoor seating areas provide opportunities to accommodate multiple groups for targeted programming.

Learning from Country

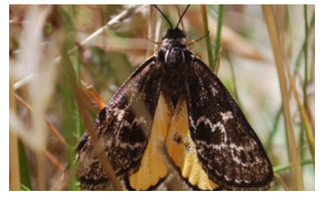
Opportunities

1. Central gathering area /Yarning circle provides opportunities for outdoor learning and educational talks from local community members.
2. Nature trail provides a tactile, sensory walk through the indigenous landscape. Providing opportunity to educate students on local fauna & flora.
3. Proximity to main entrances provides ideal location for welcoming to school.

Regenerating

Opportunities

1. Where possible include local natural materials, such as natural pavement types referencing colours of the local landscape.
2. Reestablishment of endemic grasses & wildflower vegetation to provide habitat for the endangered Golden Sun Moth and other reptiles.



Note: Precident imagery demostrates the design intent only.

D Landscape Design

3. Circulation + Access

Accessible Campus

Due to the complexity of the existing site topography, accessibility has been a key driver behind the design of the new high school.

The ground floor level has been set based on the existing contours of the northern stub road. This means that the main entrance to the school can be reached via an accessible 1:14 ramped walkway leading from the street to the visitor and student receptions.

Several of the key outdoor play and learning areas have also been based on this RL, including the main quadrangle, the productive garden, the hall COLA and the canteen COLA.

The lower ground floor has been designed to allow an accessible connection from the bus bays into the school.

A 1:14 ramp connects the footpath at the bus bay into the Lower Ground floor.

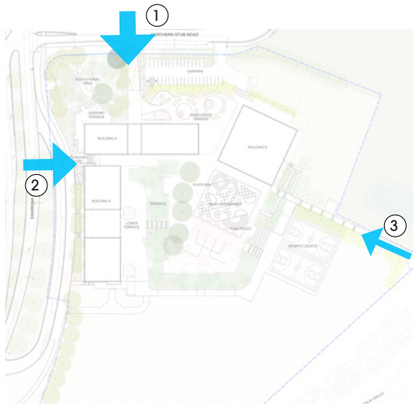
The open space is divided into an upper playground (ground floor) and lower playground (lower ground floor). The upper playground has level access from the Administration, Library, Food Technology, Gym, Canteen and PE/Performance Units.

The lower playground has level access from the Support Unit, Visual Arts, Materials, Wood and Metal, and Outdoor Workshop units.

In between the two main playground levels, a range of landscape psaces are provided, which are wheelchair accessible wherever possible. A series of 1:33 and 1:21 walkways wrap around the southern and eastern sides of the upper playground, creating an unobtrusive connection from the lower playground, past the sports courts, and up to the hall. When a more direct route is preferred, the lift can be used.

The north-west corner of the site is complex in topography, however selected areas of the Educational Walk, and the entirety of the Yarning Circle are fully accessible in this zone.

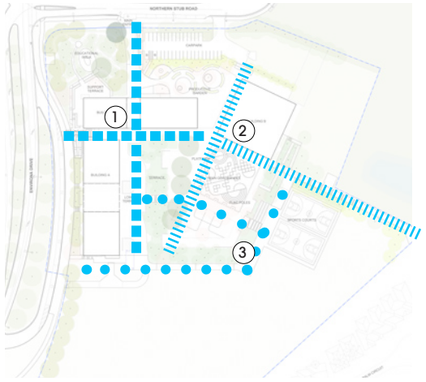
Entries



Opportunities

1. Entrance from North Road provides the main entrance to the campus. The entrance also connects the accessible connection from the carpark.
2. Entrance from Environia Drive provides the secondary entrance to the campus. This entrance accommodates students from bus networks
3. Southern entrance provides pedestrian & cyclist access from the adjacent suburb.

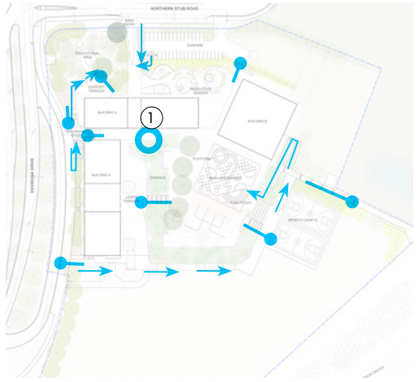
Axis



Opportunities

1. The main axis links the two entries of the school and continues the sight-lines through the buildings and the landscape beyond.
2. The secondary axis connects the forms a strong spine that the landscape areas project from.
3. The tertiary connections link the main access/ circulation points.

Transition

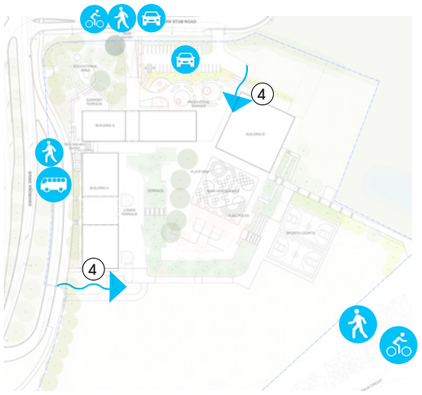


Opportunities

1. Central lift provides direct access between upper to lower campus
2. Ramp locations provide access for students with mobility issues and ensures all areas are inclusive
3. Stair locations provide quick negotiation of level changes throughout the site.

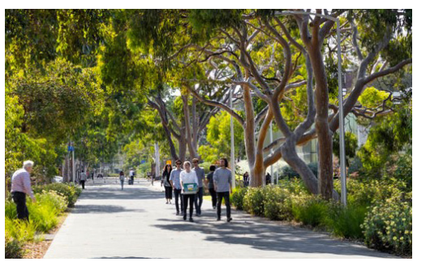
Lift
Stair
Ramp

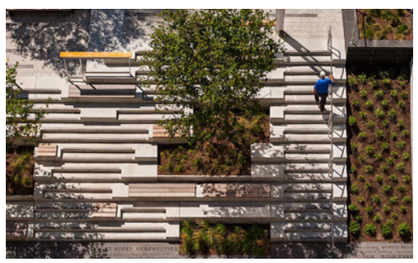
Travel

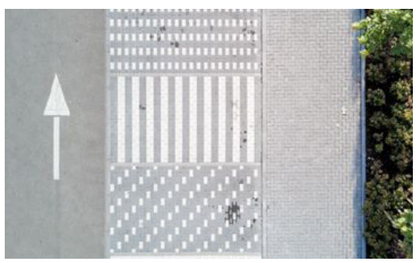


Opportunities

1. Kiss & drop and carpark are located adjacent the main entrance.
2. Bus bay is provided to the secondary entrance
3. Pedestrian & cyclist access is provided to the South .
4. Emergency vehicle access is provided from the carpark and from North Road.







Note: Precident imagery demostrates the design intent only.

The productive garden, adjacent to food technology, is also fully accessible.A series of ramps and landscape batters address level differences between the raised paving areas to the west and the existing levels of the Mick Sherd Oval, while providing equality of amenity for all capabilities.

Compliant access to the agricultural plot is provided by a series of 1 in 14 ramps to navigate the steeply sloping site.

D Landscape Design

4. Green Amenity

Overview

The provision of generous and diverse landscaped outdoor spaces that provide a strong connection to the surrounding nature and its cultural landscape is one of the key objectives of the landscape design for the new High School in Jerrabomberra.

The creation of spaces that are soft, greener and have a strong connection to nature, which implement sustainable water and energy practices in the design, embrace natural systems and utilise the natural landscape patterns.

The Educational Walk at the north-western corner of the site will showcase endemic plant species and the natural beauty of the surrounding landscape and provide teaching spaces to learn from Country.

The productive and kitchen garden adjacent to the VET (Vocational Education and Training) cafe and the orchards will include endemic, native and exotic species to be used as fresh produce in the food tech classes and VET cafe and will provide important opportunities to learn from nature, to use sustainable water and energy practices and embrace natural systems.

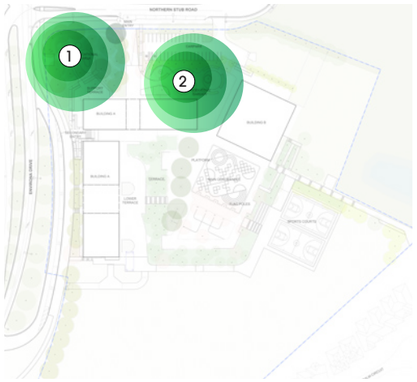
The 3:1 and 4:1 embankment between the main quadrangle and the lower ground floor is a major landscape feature. It will be planted with native grasses and shrubs and includes specimen shade trees.

The central upper campus provides several large trees that provide shade, shelter and aminity with seating opportunities underneath them.

The perimeter buffer planting provides native grass planting along the school boundaries to strengthen the schools interface with the surrounding landscape. This planting provides additional biodiversity and habitat for local fauna.

The site provides two opportunities to regenerate and re-establish the endemic grassland species to the southern & eastern slopes of the site, grounding the site to the existing ridge and wetland typology and substantially improving the biodiversity of the school site and surround landscape.

Understanding Country



Opportunities

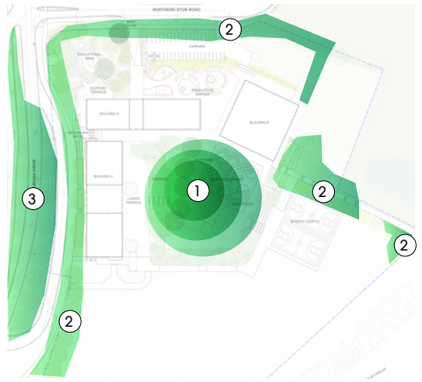
1. Endemic, local and native planting to be used to highlight native species and provide learning opportunities.
2. Productive and kitchen gardens and orchards including native and exotic species will provide fresh produce for use in the food tech classes and for use in the VET cafe

Terraces

Opportunities

1. The level difference between the main quad and the lower ground floor provide an opportunity to use feature specimen trees and understory planting to make the 3:1 and 4:1 batters a landscape feature.

Canopy



Opportunities

1. The central upper campus is reinforced with canopy trees to provide shade, shelter and amenity.
2. Perimeter tree planting reinforces the boundary and anchors the architecture into the landscape.
3. Opportunity to establish street tree planting along North Road and Environa Drive.

Regenerate

Opportunities

1. Opportunity to regenerate and re-establish the endemic grassland species to the southern & eastern slopes of the site. This will help reconnect the landscape to the existing ridge and wetland typology. Additionally it will dramatically improve the biodiversity of the landscape by regenerating the local fauna communities.

Note: Precident imagery demostrates the design intent only.

D Landscape Design

5. Diverse Spaces

Campus Amenity

A variety of diverse spaces has been provided on the campus to encourage and enable a range of activities for the students. Provide areas of respite and foster moments of curiosity. This is executed through spaces designated for individual study, small groups and large classes as well as passive and active recreation, each offering an opportunity for Connection with Country.

The new high school in Jerrabomberra has been developed to provide a high quality landscape setting throughout the campus, designed to respond to the Design Guidelines and Principles and the site's context within the landscape, local plant communities and connections with Country.

The new landscaped spaces are designed to respond to the four landscape principles of identity, access, green amenity and diverse spaces and will provide a campus with a strong sense of identity that is inclusive and accessible that greatly enhances the green amenity of the site and provides diverse spaces that encourage a range of activities for students. Key features include avenue planting, low height walls for informal seating, semi enclosed outdoor learning areas, vegetated garden beds, shade trees, open play space, turfed embankments and tiered seating.

Covered walkways, covered outdoor learning spaces and canopy tree's throughout the campus provide protection from the sun and rain.

Northern Campus

Opportunities

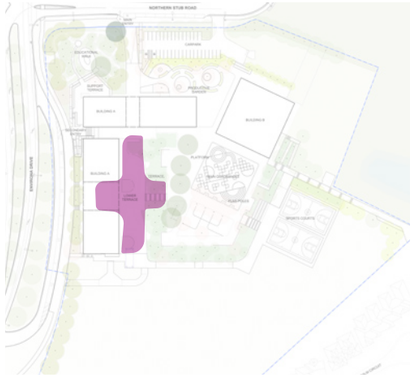
1. Central Yarning cirlce with organic seating area to provide opportunity for outdoor classrooms or presentations.
2. Cafe seating and the productive gardens allow the food tech and cafe programming extend into the area.
3. The enclosed Support Terrace provides a comfortable and secure space to assist the support unit.

Main Quad

Opportunities

1. Plaza with seating under Canopy tree planting to allow for multiple smaller user groups at once.
2. Versatile surface with dynamic linemarking to allow creative play moments. This area will allow for many smaller groups or larger gatherings such as school assembly.
3. Artificial lawn area with tables and chairs allow students to gather and socialise at recess and lunch.

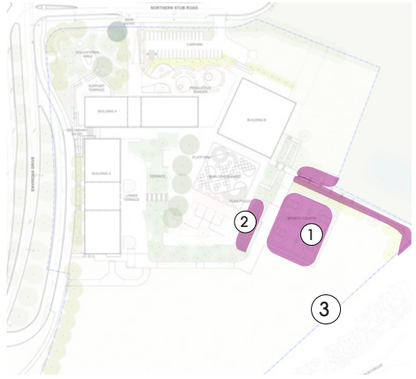
Lower Quad



Opportunities

1. Lower plaza that provides good spill out space for Tech and arts programming during class time whilst allowing for more informal gathering and play opportunities during student breaks. The inclusion of large terraced seating stairs provides opportunities to view performances.
2. The proximity to Environa Drive will allow for deliveries of building supplies for the arts/drama and wood & metal workshops.

Southern Campus



Opportunities

1. Target play provided in the form of two plexipave basketball/netball courts
2. Bleacher seating will provide opportunity to watch sport events or gatherings for larger groups.
3. Southern entrance and forecourt to the connection to David Madew Oval. End of trip facilities are also located nearby.

Note: Precident imagery demostrates the design intent only.

D Landscape Design

6. Landscape Site Plan

The high school campus is proposed to be a pedestrian friendly campus where priority is given to pedestrians.

The new high school campus has been designed in accordance with the four landscape principles of identity, access, green amenity and diverse spaces. The landscape design created diverse landscape spaces on four different levels which reflect the complex site topography by maximising accessibility between the different levels:

- The largest terrace is located at RL 604.35 and accommodates the main school entry with adjacent school buildings for Administration and the Library, the productive garden and the main quadrangle
- The Lower Terrace at RL 600.30 provides access to building A and to the hard paved outdoor space for students in front of the building. It also accommodates the Support Terrace and the main features of the Educational Walk which are fully accessible and located at the same level. The smaller informal walking tracks followthe existing topography of the site.
- The Sports Courts are located at RL 601.80
- The Car Park is located at a gently sloped terrace betweeen RLs 604.43 and 604.32

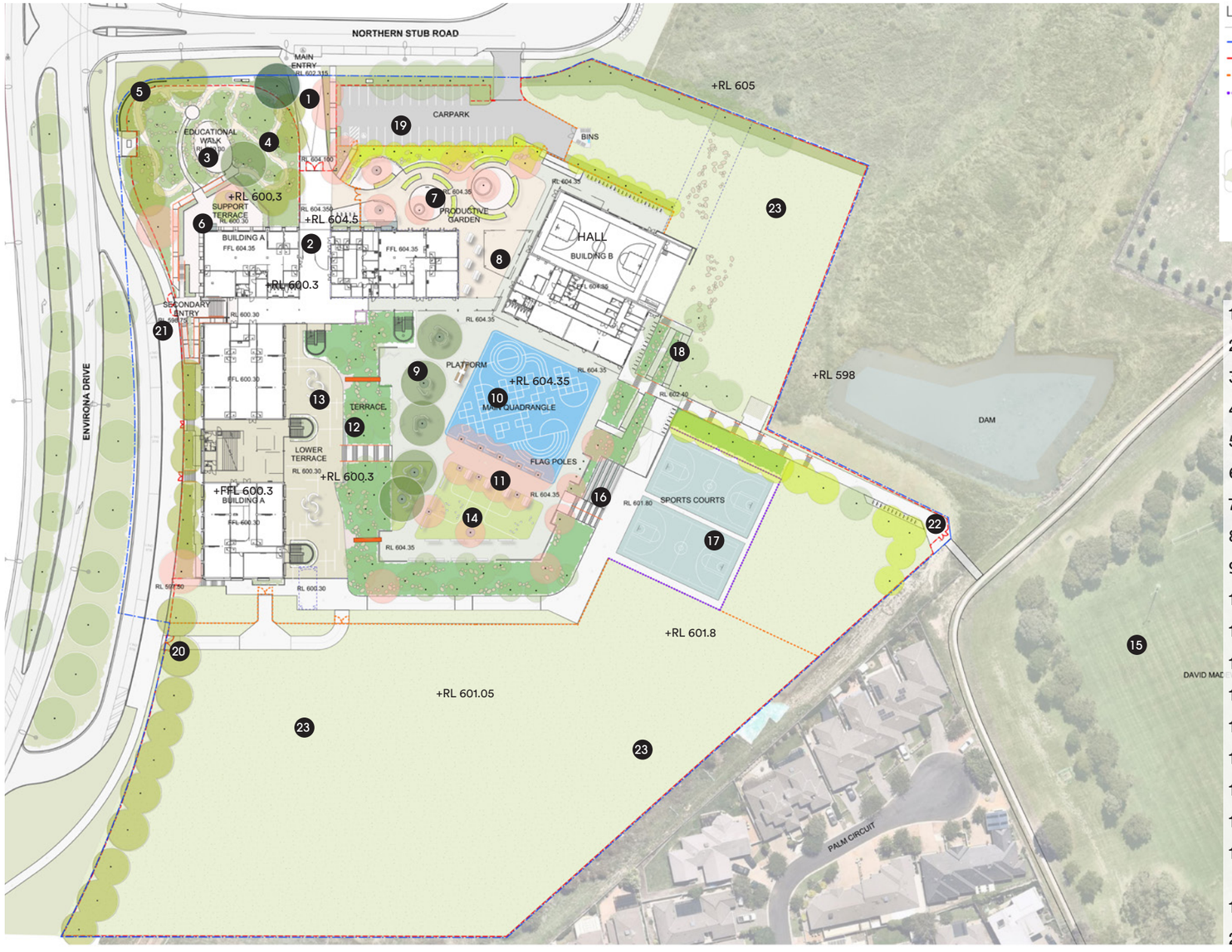
All terraced outdoor spaces are connected by flights of stairs and ramps to provide full accessibility for all abilities between them. The embankments between the different levels are planted with native grasses, shrubs and trees and are a main landscape element of the school campus.

Key features include shade tree plantings, productive garden with raised planter beds and seating opportunitites, semi enclosed outdoor learning areas, garden beds, shade trees, open play spaces, planted embankments and tiered seating.

The multifunctional main quadrangle will act as a circulation, breakout and play space for the school.

Covered walkways, covered outdoor learning spaces and canopy trees throughout the campus provide protection from the sun and rain.

Bicycle parking enclosures and unsheltered hoops are provided at the northern and eastern school entrances. End of trip facilities are provided for staff within the staff unit and for the students within hall changing amenities.



LEGEND

- BOUNDARY
- FENCING - 2.15m high Palisade Fence
- FENCING - 1.20m high Palisade Fence
- FENCING - 2.40m high Chainwire Fence
- PROPOSED TREES (ALL COLOURS) Site wide
- PROPOSED PLANTING Grasses, Shrubs, Groundlayers

1. Main entry & Welcome tree
2. Main entry forecourt
3. Outdoor classroom/gathering
4. Nature trail
5. Signage wall
6. Support Terrace
7. Productive gardens
8. COLA
9. Social Plaza
10. Dynamic multipurpose play
11. Social avenue
12. Social Terrace
13. Lower Terrace
14. Multipurpose gathering area
15. Existing Oval
16. Spectator bleachers (Stage 1)
17. Sports Courts
18. Ramp access from upper to lower terrace
19. Car park
20. Delivery access
21. Secondary entrance
22. Southern entry node
23. Site revegetation for biodiversity & habitat

The main entrance of the school is located at the north of the site off North Road. The lower lying road is connected to the school entrance by a series of 1:14 ramps.

The school also features two secondary entrances: One is located at the western site of the school, off Environa Drive. The other is located south-eastern corner of the school, providing a direct connection to the David Madew Oval.

D Landscape Design

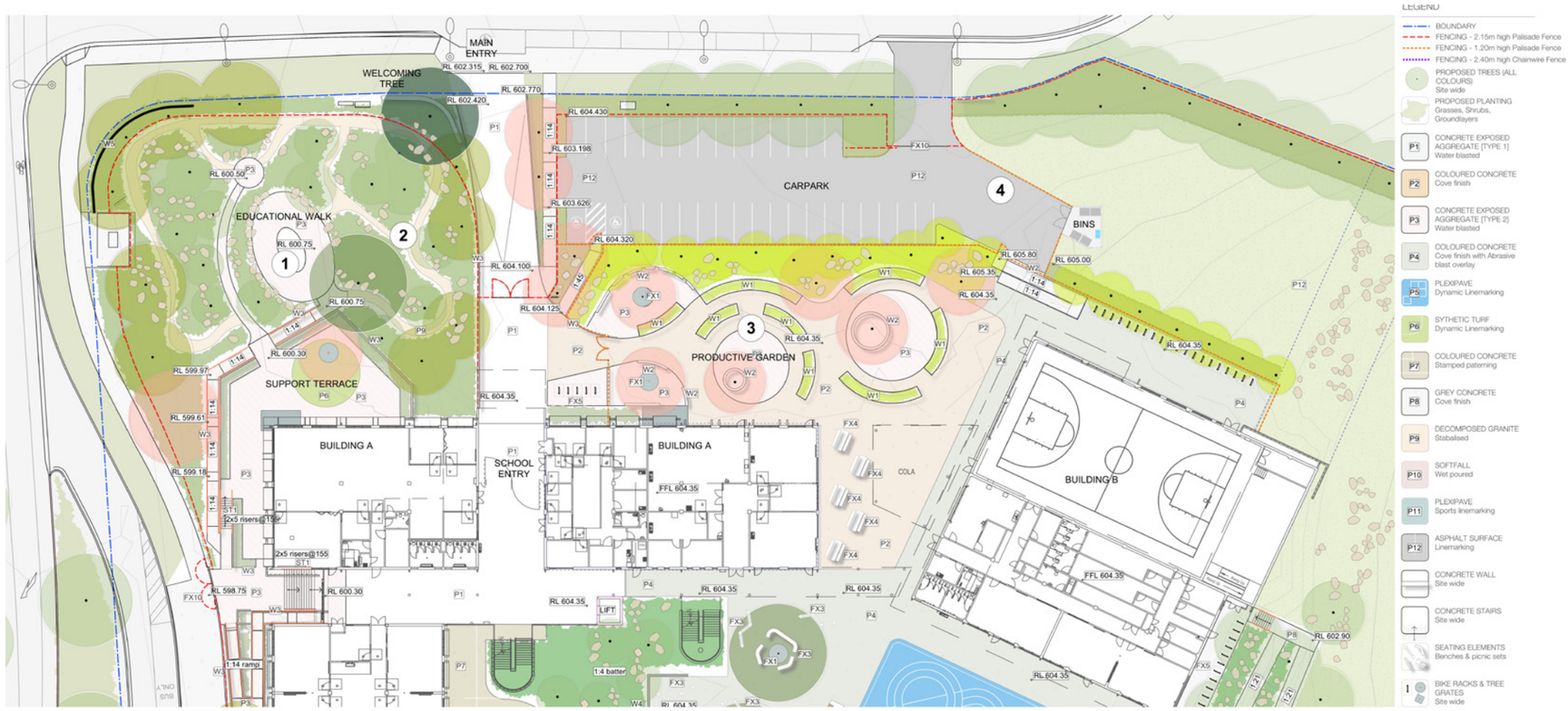
7. Detail Plan: Northern Campus

The Northern Campus comprises the main school entrance with extended driveway and 1:14 sloped footpath.

To the west of the driveway lies the Educational Walk with central Yarning Circle, the largest of the outdoor learning spaces, featuring endemic and native grasses, shrubs and trees and providing a educational bushwalk-like experience with ample learning opportunities. The two outdoor learning spaces are fully accessible. The informal walking tracks follow the existing terrain and are not fully accessible due to the site's topography. The Support Unit Terrace south of the Walk and has an accessible connection to the Educational Walk.

The school's car park is located east of the school entrance driveway along the northern boundary, parallel to the northern stub road. The productive garden, inspired by the circular shapes of the Yarning Circle is located south of the car park and includes raised planter beds for native and exotic herb, medicinal and food plants with circular and semi-circular seating opportunities under shade trees.

The Administration and Library buildings at the main school entrance and Building B form the 'natural' but very permable and accessible boundary between the Northern and Southern Campuses.



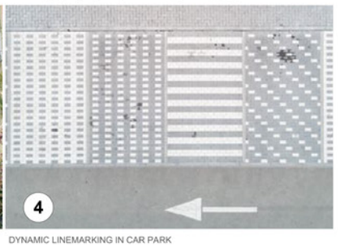
NORTHERN CAMPUS DETAIL PLAN

PRECENDENT IMAGERY
*Note - imagery display design intent only.

YARNING CIRCLE

EDUCATIONAL WALK

PRODUCTIVE GARDENS



DYNAMIC LINEMARKING IN CAR PARK

0 5 10 15 20 25 M

D Landscape Design

7. Detail Plan: Southern Campus

The Southern Campus accommodates the Lower Terrace which provides access to building A and is predominantly a sealed multifunctional outdoor terrace with several seating opportunities.

The higher-lying main quadrangle space is located east of the Lower Terrace. It is the largest combined outdoor space of the school and comprises a multifunctional Plexipave field, a triangular synthetic turf area with tables and benches and other various seating elements, as well as large shade trees with tree grates in concrete paving with benches around them for shady seating and informal learning or socialising.

The Lower Terrace is connected to the higher-lying quadrangle space by several flights of stairs. The 3:1 to 4:1 steep embankment between the two spaces is planted out with native grasses, shrubs and trees and is one of the main landscape features of the school. Site rocks found on site and during excavation will informally terrace the embankment and provide favourable microclimate for the plants and will also provide habitats and increase the biodiversity of the site.

East of the main quadrangle terrace lie the two sports courts, located on different terrace 2.55m below. A series of ramps at the north-eatsern corner of the quadrangle provides an accessible access path between both spaces.

The emergency vehicle access is located along the southern internal school boundary which separates the developed school site from currently unused grassland which could potentially be developed in a future school extension stage. This native grassland connects the school development with the surrounding landscapes and provides an important opportunity to improve the biodiversity of the landscape by regenerating the local fauna communities.

A second currently unused grassland area within the school grounds is located north of the sports courts. This area is separated from the sports courts by a series of stairs and ramps leading to the south-eastern secondary school entrance, which provides a direct access to the existing David Madew Oval on the opposite site of the road, which can be used by the school during school hours.

SOUTHERN CAMPUS DETAIL PLAN

PRECENDENT IMAGERY
*Note - imagery display design intent only.

1 PLAY SLIDES ON TERRACE

2 PLEXIPAVE WITH DYNAMIC LINEMARKING

3 INFORMAL SEATING ARES WITH TREE CANOPY

4 TERRACE SEATING TO THE SPORTS COURT

5 LOW GROWING NATIVE GRASSES FOR HABITAT

0 5 10 15 20 25 M

D Landscape Design

8. Tree Plan

As outlined in the Design Guidelines and Landscape Design Principles, one of the key objectives of the landscape design is the maximisation of the overall tree canopy area to maximise shade in summer, protection against winter winds and to reduce the heat island effect.

Tree plantings are one of the most important landscape elements that provide green amenity. The landscape design aims to maximise the overall tree cover throughout the school campus to provide summer shade and protect from winter winds. The tree species and overall plant species selection focuses on endemic and native species. The selection is complemented by selected non-native deciduous species proven to be resilient in the tough school settings to provide the balance between summer shade and winter sun.

LEGEND

- WELCOME FEATURE TREE 100L NATIVE
- FEATURE CANOPY TREE 100L
- CANOPY TREE 45L NATIVE
- CANOPY TREE 45L EXOTIC
- CANOPY TREE 25L NATIVE
- CANOPY TREE 25L EXOTIC

APPROX. TOTAL SITE AREA - 45,000m2
APPROX. MATURE CANOPY AREA - 8,200m2
APPROX. MATURE CANOPY COVER - 18.2%

TREE TYPE	POT SIZE	QTY
Welcome Tree	100L	1
Feature Canopy Tree	100L	6
Canopy Tree - Exotic	45L	29
Canopy Tree- Native	45L	23
Canopy Tree - Exotic	25L	23
Canopy Tree - Native	25L	79
	Total	**160**

Welcome Tree species	Matue Height
Eucalyptus sideroxylon 'rosea'	20m+

Feature Canopy Tree species	Matue Height
Eucalyptus pauciflora 'Little Snowman'	15m

Canopy Tree species (exotic)	Matue Height
Cedrus deodara	20m+
Juglans nigra	12m
Lagerstroemia indica	8m
Nyssa sylvatica	10m
Pistacia chinensis	8m
Populus simonii	12m
Quercus palustris 'Freefall'	20m+
Zelkova serrata 'Green Vase'	14m

Canopy Tree species (native)	Matue Height
Angophora hispida	7m
Banksia serrata	9m
Callitris endlicheri	15m
Eucalyptus cinerea	15m
Eucalyptus dives	15m
Eucalyptus pauciflora 'Little Snowman'	15m
Eucalyptus mannifera	15m

0 5 10 15 20 25 M

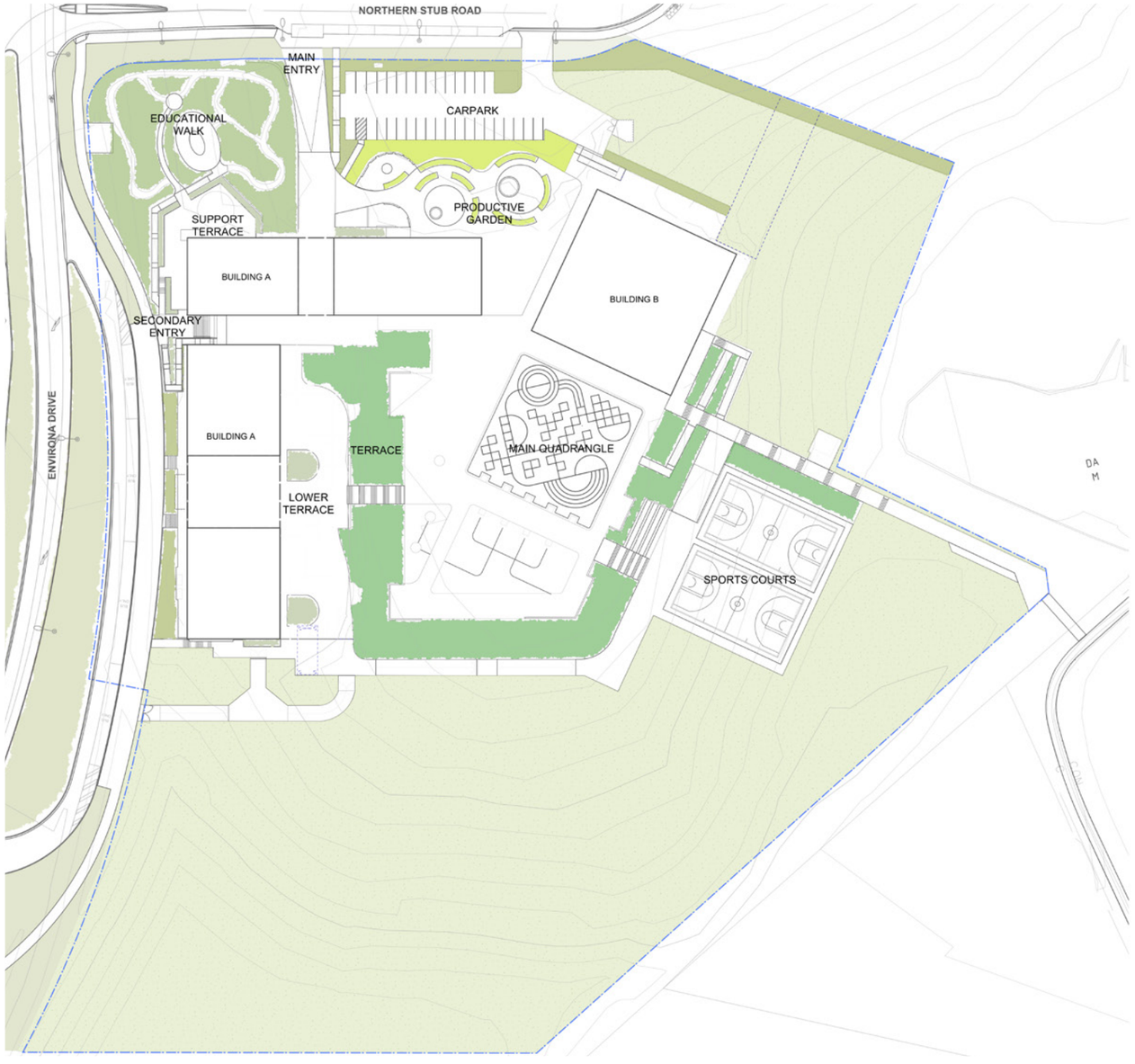
D Landscape Design

9. Planting Plan

The planting design focuses on endemic and native plant species, providing a strong connection to the surrounding landscape and to provide habitat to native fauna and increase the biodiversity.

Input from the local indigenous community on the final species selection should be sought. It will also utilise hardy, low maintenance native and non-native plant species with a proven performance record in school environments.

All plant species within the Educational Walk area and all perimeter planting will use exclusively endemic and native plant species to tie in the school development with the surrounding existing landscape and improve the overall biodiversity of the site.



LEGEND

PLANTING

- PT1 - CAMPUS PERIMETER PLANTING
- PT 2 - EDUCATIONAL PLANTING
- PT 3 - PRODUCTIVE GARDEN
- PT 4 - TERRACE PLANTING
- PT 5 - PLANTER BED
- PT 6 - NATIVE GRASSLAND

APPROX. TOTAL SITE AREA - 45,000m2
APPROX. VEGETATED SITE AREA - 25,000m2

	PLANT TYPE	POT SIZE	RATE / SPACING	RATIO
PT 1 - CAMPUS PERIMETER PLANTING				
AREA: 880	m²			
	Grasses	Tube	6 Plants / m²	40%
	Large Shrubs	150mm	2 Plants / m²	20%
	Medium Shrubs	150mm	4 Plants / m²	20%
	Small Shrubs / Groundcovers	Tube	6 Plants / m²	20%
				100%
PT 2- EDUCATIONAL PLANTING				
AREA: 1250	m²			
	Grasses	Tube	6 Plants / m²	50%
	Large Shrubs	150mm	2 Plants / m²	10%
	Medium Shrubs	150mm	4 Plants / m²	20%
	Small Shrubs / Groundcovers	Tube	6 Plants / m²	20%
				100%
PT 3- PRODUCTIVE GARDEN				
AREA: 333	m²			
	Grasses	Tube	6 Plants / m²	25%
	Large Shrubs	150mm	2 Plants / m²	15%
	Medium Shrubs	150mm	4 Plants / m²	30%
	Small Shrubs / Groundcovers	Tube	6 Plants / m²	30%
				100%
PT 4- TERRACE PLANTING				
AREA: 2130	m²			
	Grasses	Tube	6 Plants / m²	50%
	Medium Shrubs	150mm	4 Plants / m²	20%
	Small Shrubs / Groundcovers	Tube	6 Plants / m²	30%
				100%
PT 5- PLANTER BEDS				
AREA: 215	m²			
	Grasses	Tube	6 Plants / m²	25%
	Large Shrubs	150mm	2 Plants / m²	15%
	Medium Shrubs	150mm	4 Plants / m²	30%
	Small Shrubs / Groundcovers	Tube	6 Plants / m²	30%
				100%
PT 6- GRASSLAND REVEGETATION				
AREA: 20335	m²			
	Grasses	Tube	6 Plants / m²	20%
	Seeding	-	10kg / Hectare	80%
				100%

0 5 10 15 20 25 M

D Landscape Design

10. Planting Palettes

PT1 - Campus Perimeter Planting


Eucalyptus sideroxylon


Cassina longifolia


Acacia dealbata


Lomandra confertifolia


Dodonaea viscosa


Eucalyptus cinerea

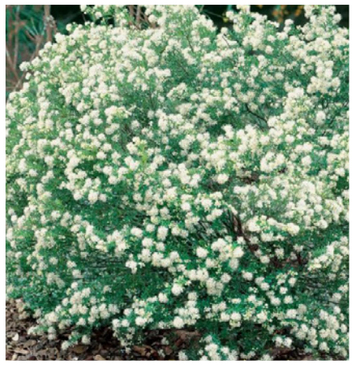
PT2 - Educational Planting


Austrostipa densiflora


Diurus sulphurea


Wurmbea dioica


Hakea eriantha


Cyptandra amara


Xanthorrhoea australis

PT3 - Productive Garden


Bulbine bulbosa


Micoseris lanceolata


Dichopogon fimbriatus


Geranium solanderi


Atriplex nummularia


Citrus australasica

D Landscape Design

10. Planting Palettes

PT4 - Terrace Planting


Carex 'Frosted Curl'


Philotheca myoporoides


Eucalyptus mannifera


Carex apressa


Eucalyptus dives


Hebe glaucophylla

PT5 - Planter Beds


Grevillea 'Poorinda Royal Mantle'


Zelkova serrata


Kunzea baxteri


Wetsringia fruticosa

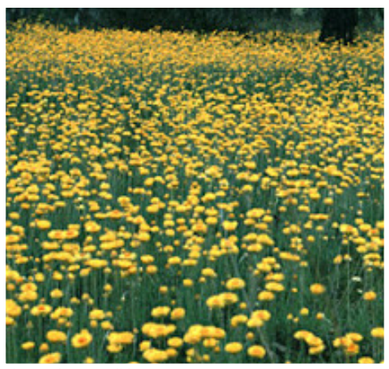

Dampiera stricta


Grevillea junipera 'Prostrate' Yellow

PT6 - Grassland Revegetation


Themeda australis


Dichelachne citrina


Leucochrysum albicans


Cymbopogon refractus


Joycea pallida


Sorghum leiocladum

D Landscape Design

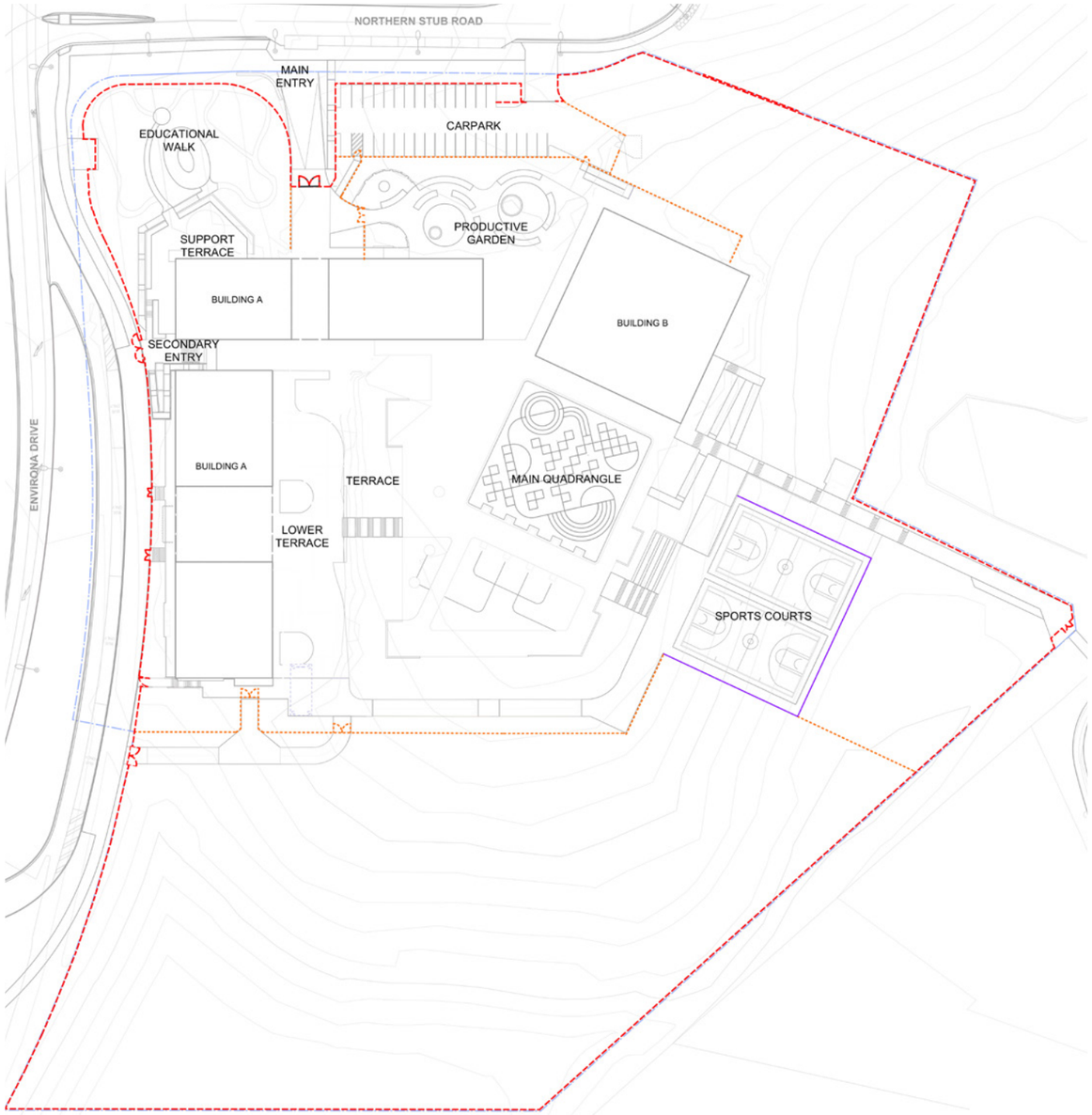
10. Fencing Plan

The campus is located within secure private grounds and protected by a EFSG-compliant 2.1m high palisade fence and gates.

Fencing lines have been set back from the boundary with low level planting in front, so that their visual impact is reduced.

Lower internal fences separate the currently used and developed outdoor school spaces from the car park and the grassland areas within the school grounds.

A 2.4m high chainwire fence has been proposed around three sides of the sports courts for ball control, while the western side remains unfenced to allow for unrestricted viewing and access from the tiered seating.



LEGEND

FENCING

FENCE TYPE 1
EFSG-compliant boundary fence
2.15m high palisade fence

FENCE TYPE 2
Entry Forecourt / internal
1.2m high palisade fence

FENCE TYPE 3
2.4m high chainwire fence

GATES
Double swing gate
EFSG-compliant palisade fence

GATES
Car park entrance
Sliding gate

GATES
Double swing gate
1.2m high palisade fence

FENCE TYPE 1
EFSG-compliant boundary fence
2.15m high palisade fence

FENCE TYPE 2
Entry Forecourt / internal
1.2m high palisade fence

FENCE TYPE 3
2.4m high chainwire fence

0 5 10 15 20 25 M